

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

| | |
|---|---|
| Date of mailing (day/month/year) 10 July 2001 (10.07.01) | |
| International application No. PCT/US00/19090 | Applicant's or agent's file reference |
| International filing date (day/month/year) 13 July 2000 (13.07.00) | Priority date (day/month/year) 13 July 1999 (13.07.99) |
| Applicant VAN NICE, Jeff, G. et al | |

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
 09 February 2001 (09.02.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

| | |
|---|----------------------------------|
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland | Authorized officer H. Zhou |
| Facsimile No.: (41-22) 740.14.35 | Telephone No.: (41-22) 338.83.38 |

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[—/US]; W8718 Birdie Lane, Beaver Dam, WI 53916 (US). BUSSE, Brian, E. [—/US]; 125 Talmadge Street, Madison, WI 53704 (US).

(21) International Application Number: **PCT/US00/19090**

(22) International Filing Date: **13 July 2000 (13.07.2000)**

(74) Agents: **KELLEY, Timothy, M. et al.**; Michael Best & Friedrich LLP, 100 East Wisconsin Avenue, Milwaukee, WI 53202-4108 (US).

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(84) Designated States (*regional*): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

(71) Applicant (*for all designated States except US*): **ARROW-HEAD SYSTEM LLC** [US/US]; 124 North Columbus Street, P.O. Box B, Randolph, WI 53956 (US).

Published:
— with international search report

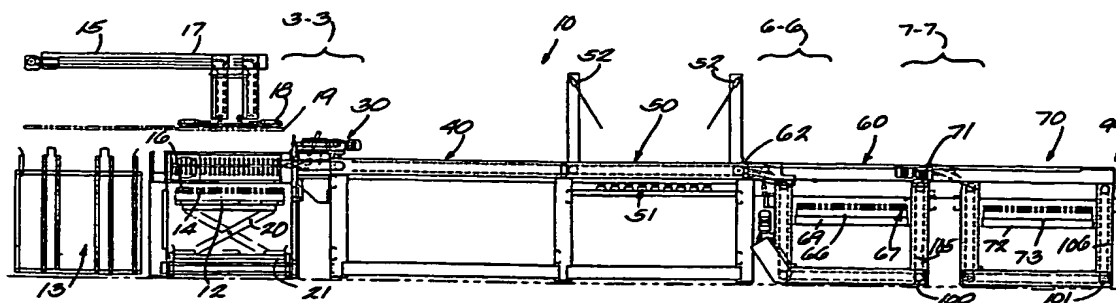
(88) Date of publication of the international search report:
26 July 2001

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **VAN NICE, Jeff, G.** [US/US]; 212 Seippel Boulevard, Apartment #05, Beaver Dam, WI 53916 (US). **VANDERHOEVEN, Dennis, A.**

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **SHEET SEPARATOR, INSPECTION, SORTATION AND STACKING SYSTEM**



(57) Abstract: The present invention is embodied in a separator sheet handling assembly (10) that includes a lifting assembly (20) adapted to receive a pallet (12) containing a stack of separator sheets (14). The lifting assembly (20) positions the stack of separator sheets (14) into a predetermined location where a feed assembly (30) engages a separator sheet (16) positioned at the top of the stack of separator sheets (14). The feed assembly (30) removes the separator sheet (16) and transports it to a test assembly (50) where the separator sheet (16) is monitored for a particular characteristic such as cleanliness or structural integrity. The separator sheet (16) is delivered to a first storage assembly (60) if the separator sheet (16) has the particular characteristic, or a second storage assembly (70) if the separator sheet (16) does not include the particular characteristic.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/19090

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B65H 7/02

US CL : 271/265.04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : Please See Continuation Sheet

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
USPO, EPO, JPO, Derwent

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|---------------------------------|
| Y, P | US 6,082,732 A (HUTCHISON et al.) 04 July 2000 (04.07.2000), Figure 2 and remainder of entire document. | 1 and 33 |
| Y | US 5,115,144 A (KONISHI et al.) 19 May 1992 (19.05.1992), Column 4, lines 1-37 and remainder of entire document. | 1, 20, 21 and 33 |
| Y, P | US 5,979,891 A (ROUX) 09 November 1999 (09.11.1999), Column 1, lines 4-23 and entire remainder of the document. | 1 and 33 |
| Y | US 3,812,964 A (WOODRUFF) 28 May 1974 (28.05.1974), Figure 2, Column 6, lines 42-47, column 7, lines 12-17 and entire remainder of document. | 1, 4, 22-29 and 33-35 |
| Y | US 4,768,913 A (BABA) 06 September 1988 (06.09.1988), Figures 1-3 and remainder of entire document. | 1, 5, 6, 8-11, 14-16, 33 and 40 |
| Y | US 4,180,258 A (WILDFORSTER) 25 December 1979 (25.12.1979), Figure 3 and remainder of entire document. | 1, 32 and 33 |
| Y | US 4,211,398 (BISHOP) 08 July 1980 (08.07.1980), Figures 1 and 2 and remainder of entire document. | 1, 5, 6, 8, 9, 12-17, 33 and 40 |
| Y | US 4,245,830 (FICHTE et al.) 20 January 1981 (20.01.1981), Figure 1 and entire remainder of document. | 2, 3, 5-8, 14, 39 and 40 |



Further documents are listed in the continuation of Box C.



See patent family annex.

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| * Special categories of cited documents: | |
| "A" document defining the general state of the art which is not considered to be of particular relevance | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "E" earlier application or patent published on or after the international filing date | "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "O" document referring to an oral disclosure, use, exhibition or other means | |
| "P" document published prior to the international filing date but later than the priority date claimed | "&" document member of the same patent family |

Date of the actual completion of the international search

20 December 2000 (20.12.2000)

Date of mailing of the international search report

18 JAN 2001

Name and mailing address of the ISA/US

Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

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Christopher P Ellis

Telephone No. 703-308-1113

Diane Amett

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/19090

C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|--------------------------------|
| Y | US 4,765,606 A (MARASS) 23 August 1988 (23.08.1988), Figures 1 and 2 and remainder of entire document. | 2, 3, 5-7, 39 and 40 |
| Y | US 3,717,249 A (FALEY) 20 February 1973 (20.02.1973), Figures 1 and 14 and remainder of entire document. | 1, 4, 22, 24-29, 33, 34 and 37 |

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/19090

Continuation of B. FIELDS SEARCHED Item 1: 271/265.04, 3.15, 5, 4.02.7, 10.01, 12, 13, 90, 93, 171, 226, 98, 272, 299, 303, 305, 217, 248; 209/534, 588; 73/37.7, 838; 101/73 and all of classes 271 and 209 for key words.

PATENT COOPERATION TREATY

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REC'D 27 AUG 2001

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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|--|---|---|
| Applicant's or agent's file reference 18049-9030 | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/US00/19090 | International filing date (day/month/year) 13 July 2000 (13.07.2000) | Priority date (day/month/year) 13 July 1999 (13.07.1999) |
| International Patent Classification (IPC) or national classification and IPC IPC(7): B65H 5/00, 7/12 and US Cl.: 271/265.04 | | |
| Applicant ARROWHEAD SYSTEMS LLC | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

| | |
|---|--|
| Date of submission of the demand 09 February 2001 (09.02.2001) | Date of completion of this report 19 July 2001 (19.07.2001) |
| Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230 | Authorized officer Christopher P Ellis <i>Diane Smith</i> Telephone No. 703-308-1113 |

Form PCT/IPEA/409 (cover sheet)(July 1998)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/19090

I. Basis of the report**1. With regard to the elements of the international application:***

- ☒ the international application as originally filed.
- ☒ the description:
pages 1-7 _____ as originally filed
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.
- ☒ the claims:
pages 8-14 _____, as originally filed
pages NONE _____, as amended (together with any statement) under Article 19
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.
- ☒ the drawings:
pages 1-6 _____, as originally filed
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.
- ☐ the sequence listing part of the description:
pages NONE _____, as originally filed
pages NONE _____, filed with the demand
pages NONE _____, filed with the letter of _____.

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages NONE
- ☒ the claims, Nos. NONE
- ☒ the drawings, sheets/fig NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US00/19090

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)

Claims 1-40 YES
Claims NONE NO

Inventive Step (IS)

Claims 1-40 YES
Claims NONE NO

Industrial Applicability (IA)

Claims 1-40 YES
Claims NONE NO

2. CITATIONS AND EXPLANATIONS (Rule 70.7)

Although in Claims 1, 2, 5-7, 9, 12-16, 19-22, 26, 28, 33, 34 and 39 Hutchinson et al. discloses a separator sheet handling system (14), sheets (18), different locations (38 or 46), feed assembly (20), test assembly (10), first storage (38), second storage (46), alignment facility (30), lifting frame (10), fences ((7), first drive roller (24), pivotal connection that is moveable in relation to the support structure (top of 20), vacuum chamber (bottom of 20), positioning drive (column 2, lines 66-67), horizontal motion (Fig. 2), adjacency of the second receptacle to the frame (Fig. 2), cleanliness monitoring (the monitor would certainly change output (monitor) if a grossly dirty sheet passed), monitoring structural integrity (the monitor would pick up holes in the sheets that affect structural integrity), directing guide (34), second storage assembly receiving guide (extension above 46), lifting frame (46), aligning before monitoring (the sheets are aligned at the stack before monitoring), but lacks a lifting assembly, pallet and aligning guides and Marass discloses a lifting assembly (column 1, lines 6-9), pallet 4 and aligning guides 7. there is no motivation found in the art of record to make the combination.

Claims 1-40 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest the combination.